SPECIFICATION AMENDMENTS

Replace the paragraph at page 2, line 19 to page 3, line 6 with the following paragraph.

However, when there is no direct connection between the source and the receptor and no constant delay therebetween, it may be impossible to recover the original clock. One such instance is when the video is stored on a hard disk for playback at a later time. Figure 2 generally depicts the movement of a TS in such a system. For instance, the encoder 102 dictates the arrival of the packets for storage on the hard disk drive 202. The hard disk drive 202 incorporates a timing generator having the clock rate of the encoder used to generate PCR values. T~~t~~he storage apparatus monitors the output of the timing generator and outputs a packet when the PCR value in the packet equals the value in the timing generator. However, for non-PCR packets, there is no timing value for comparison. Therefore, the decoder does not know when to output these non-PCR packets. This may result in an incomplete or fuzzy video or audio playback. Other problems that may arise are loss of color and "jumpy" pictures.

Replace the paragraph at page 4, lines 6-10 with the following paragraph.

The above and other objects, features, and advantages of the present invention are further described in the Detailed Description which follows, with reference to the drawings by way of non-limiting exemplary embodiments of the invention, wherein like reference numerals represent similar parts of the present invention throughout the several views and wherein~~fs~~:

Replace the paragraph at page 5, lines 4-5 with the following paragraph.

Figs. 10A and 10B are flow charts of a method of storing information on a medium and retrieving the stored information for playback~~play back~~.

Replace the paragraph at page 5, lines 7-15 with the following paragraph.

Referring now to the drawings in greater detail, Figure 3 generally depicts a storing apparatus 300, in accordance with one illustrated embodiment of the present invention. The apparatus 300 comprises a storage area 310, a timing field adder 320, a determiner 330, a packet

storer 340, and a storage timing generator 360. Timing field adder 320 further comprises a timing field storer 322. In the illustrated embodiment, the storage area may be, for example, a computer memory, and the timing field adder 320, the determiner 330, and the packet storer 340, may be implemented in software or firmware executing within a processor included in the apparatus; however, these elements may, instead, be implemented in hardware.

Replace the paragraph at page 6, lines 1-12 with the following paragraph.

Determiner 330 examines each packet 105 of information received in storage area 310 to determine whether packet 105 contains timing information, for example, a PCR field. Timing field storer 322 stores a value of the timing information in packet 105 in corresponding time field 324. If, ~~if~~ determiner 330 finds packet 105 to contain the timing information ~~and~~, time field storer 322 resets the value of storage timing generator 360 to the value of the timing information. If determiner 330 finds packet 105 to not contain timing information, time field storer 322 enters a value from storage timing generator 360 in corresponding timing field 324. Once timing field 324 is written, packet storer 340 stores the encoded packet 105, including the corresponding timing field 324, to a medium. In the illustrated embodiment, the medium may comprise any mechanism that can store data for a significant period of time, such as, for example, a floppy disk, hard disk, CD/RW, or optical disk.

Replace the paragraph at page 6, line 13 to page 17, line 3 with the following paragraph.

Figure 6 is a flow chart illustrating an embodiment of a method for storing the packets in the medium. In a first act A600, a packet 105 of information is received in storage area 310. In a second act A602, timing field adder 320 adds timing field 324 to packet 105 received in storage area 310. In a third act A604, determiner 330 reviews packet 105 to determine whether packet 105 contains timing information. Depending on the finding of determiner 330 in act A604, the next act may take one of two paths, an act A606 or acts A608 and A610. If determiner 330 finds in act A604 that the packet does not contain timing information, timing field storer 322 stores a value of storage timing generator 360 in corresponding timing field 324 of packet 105 in next act A606. If determiner 330 finds timing information in packet 105 in act A604, timing field storer 322 stores the value from the timing information in timing field 324 of packet 105 in next act

A608. At the same time as or in sequence with act A608, act A610 is performed to cause~~,~~ time field storer 322 to reset storage timing generator 360 with the value from the timing information in packet 105. Finally, in act A612, the encoded packet 105, including timing field 324 with the stored value from act A604 or A606, is stored on the medium. Acts A600 through A612 are repeated for each packet 105 of information until all of the information is stored in the medium.

A7 cont'd

Replace the paragraph at page 7, lines 4-10 with the following paragraph.

A8

Figure 7 illustrates another embodiment of the present invention, a retrieving apparatus 700 for retrieving information stored in the medium. Retrieving apparatus 700 comprises a comparer 710, a retrieval timing generator 720, a remover 730, a decoder 740, and a receiving mechanism 750. In the illustrated embodiment, the receiving mechanism 750 may be, for example, a computer memory, and the comparer 710 and the remover 730 may be implemented in software or firmware executing within a processor included in the apparatus 700; however, these elements may, instead, be implemented in hardware.

Replace the paragraph at page 7, lines 11-19 with the following paragraph.

A9

Retrieval timing generator 720 maintains an internal timing clock over the course of the retrieval method. Retrieval timing generator 720 may comprise an appropriate timing mechanism capable of being reset. Receiving mechanism 750 receives a packet 105 of information read from a medium. Comparer 710 compares the value in the timing field 324 with the value in retrieval ~~receiving~~ timing generator 720. The timing field 324 includes a 42 bit timing value. Remover 730 removes corresponding timing field 324 from packet 105 when comparer 710 finds the transmission time to be appropriate and outputs packet 105 to decoder 740. In the illustrated embodiment, decoder 740 is an MPEG-2 decoder, however, decoder 740 can be any decoding mechanism appropriate for decoding the encoded information.

Replace the paragraph at page 8, lines 3-12 with the following paragraph.

A10 cont'd

In a second act A810, comparer 710 compares the values in timing field 324 and retrieval timing generator 720. When comparer 710 finds the values in timing field 324 for a certain packet 105 and retrieval timing generator 720 to be equal or to be within a predetermined value

earlier than the value of the retrieval timing generator 720, remover 730 at act A820~~,~~ removes timing field 324 from the certain packet 105 and outputs the packet to decoder 740. If the clock rate of the storage timing generator 360 is faster than the encoder clock rate, all packets between two packets having timing information could not be delivered before the next packet with timing information arrives. Therefore, it is preferable for storage timing generator 360 to release the packets at a predetermined amount earlier than the stored value in timing field 324.

Replace the paragraph at page 8, line 13 to page 9, line 2 with the following paragraph.

Figure 9 illustrates one embodiment of a storing and retrieval apparatus 900 for storing multimedia information in an appropriate medium and for retrieving the stored information for playback with a certain level of accuracy. Apparatus 900 includes a storage area 310, a timing field adder 320, which includes a timing field storer 322, ~~-~~a determiner 330, a packet storer 340, a storage timing generator 360, a medium 950, ~~a storage timing generator 360,~~ a comparer 710, a retrieval timing generator 720, a remover 730, a decoder 740, and a receiving mechanism 750. As mentioned earlier, in the illustrated embodiment, the storage area 310 may be, for example, a computer memory, and the timing field adder 320, the determiner 330, and the packet storer 340~~,~~ may be implemented in software or firmware executing within a processor included in the apparatus; however, these elements may, instead, be implemented in hardware. Furthermore, the receiving mechanism 750 may be, for example, a computer memory, and the comparer 710 and the remover 730 may be implemented in software or firmware executing within a processor included in the apparatus 700; however, these elements may, instead, be implemented in hardware.

Replace the paragraph at page 10, lines 1-10 with the following paragraph.

When retrieval of the stored information is desired, receiving ~~retrieving~~ mechanism 750 reads encoded packets 105, including timing field 324, from the medium 950 in a next act A1070. Retrieval timing generator 720 initially sets the value in timing field 324 to the value of the first packet read. As packets 105 are read from medium 950, comparer 710 compares the value in timing field 324 of each packet 105 with the value in retrieval timing generator 720 in a next act A1080. When comparer 710 finds that the value in one of the timing fields 324 is a

predetermined amount less than the value in retrieval timing generator 720, comparer 710 indicates to remover 730 that transmission time for packet 105 has been reached. In a next act A1090, remover 730 removes timing field 324 from the packet 105 and outputs the packet 105 to decoder 740 in an act A1095.